

The Invention

As amended, the claims now limited to foundry binder systems which contain specific amounts of butyl tallate and cure in the presence of gaseous sulfur dioxide and a free radical initiator. Data indicate that the addition of butyl tallate to the binder improves the tensile strength development and humidity resistance of cores and molds made with these binders.

DISCUSSION OF EXAMINER'S OFFICE ACTION

Claim Rejections - 35 USC § 112, first paragraph

Claim 3 was rejected under 35 U.S.C. 112, first paragraph. The Examiner contended that there does not appear to be a written description requirement of the term "about" associated with the number 200 in the application as originally filed.

Applicants' Response

Claim 3 was amended to remove the language objected to by the Examiner.

Claim Rejections - 35 USC § 102 (e)

Claims 1-11 were rejected under 35 U.S.C. 102 (e) as being anticipated by Woodson et al '567 (US 6,604,567).

Applicants' response

Anticipation requires the disclosure, in a prior art reference, of each and every recitation as set forth in the claims. See *Titanium Metals Corp. v. Banner*, 227 USPQ 773 (Fed. Cir. 1985), *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 1 USPQ2d 1081 (Fed. Cir. 1986), and *Akzo N. V. v. U.S. International Trade Commissioner*, 1 USPQ2d 1241 (Fed. Cir. 1986). There must be no difference between the claimed invention and reference disclosure for an anticipation rejection under 35 U.S.C. 102. See *Scripps Clinic and Research Foundation v. Genetech, Inc.*, 18 U.S.P.Q. 2d 1001 (CAFC 1991) and *Studiengesellschaft Kohle GmbH v. Dart Industrie*, 220 USPQ 841 (CAFC 1984). Furthermore, each and every claim recitation must be considered in

evaluating anticipation. See *Pac-Tec, Inc. v. Amerace Corp.*, 903 F. 2d 796, 14 USPQ2d 1871 (Fed. Cir 1990).

Evidently, the Examiner had some doubts about whether the claims in the pending application were identical to those granted in U.S. Patent 6,604,567. For the Examiner issued an obvious-type double patenting rejection based upon U.S. Patent 6,604,567. As a basis for his obvious-type double patenting rejection, the Examiner made the following statements:

Claims 1-13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. 6,604,567. **Although the conflicting claims are not identical,**¹ they are not patentably distinct from each other because of the reasons given below.

US '567, like the present claims, discloses a foundry binder system comprising epoxy resin, acrylate, and peroxide. Although US '567 does not explicitly claim the use of an alkyl ester of a fatty acid, such is clearly within the scope of US '567's claims given the open claim language "comprising." In passing, it is noted that the specification refers to the addition of an alkyl ester of a fatty acid such as that presently claimed at col. 4, lines 28-50.

Applicants agree that the claims in the pending application are not identical to those granted in U.S. Patent 6,604,567. Thus, Woodson does not anticipate the amended claims.

Woodson does not anticipate Applicants' invention because Woodson says that the use of solvents is optional, there are no examples in Woodson that utilize a butyl tallate, and butyl tallate is an essential component of the binder claimed in Applicants' amended claims. Instead, Woodson discloses a "laundry list of solvents":

Although solvents are not required² for the reactive diluent, they may be used. Typical solvents used are generally polar solvents, such as liquid dialkyl esters, e.g. dialkyl phthalate of the type disclosed in U. S. Pat. No. 3,905,934, and other dialkyl esters such as dimethyl glutarate, dimethyl succinate, dimethyl adipate, and mixtures thereof. Esters of fatty acids, particularly rapeseed methyl ester and butyl tallate, are also useful solvents. Suitable aromatic solvents are benzene, toluene, xylene, ethylbenzene, and mixtures thereof. Preferred aromatic solvents are mixed solvents that have an aromatic content of at least 90% and a boiling point range of 138° C. to 232° C. Suitable aliphatic solvents include kerosene. Although the components can be added to the foundry aggregate separately, it is preferable to package the epoxy novolac resin and free radical initiator as a Part I and add to the foundry aggregate first. Then the ethylenically unsaturated material, as the Part II, either alone or along with some of the epoxy resin, is added to the foundry aggregate.³

¹Bolded for emphasis.

² Underlining added for emphasis.

³ Column 4, lines 42-60.

This passage from Woodson would not motivate the person of ordinary skill in the art to conclude that a solvent must be used in the binder, that it would be desirable to select butyl tallate from this laundry list of solvents, and that the addition of butyl tallate to the binder would improve the tensile strength development and humidity resistance of cores and molds made with these binders. Therefore, Applicants submit that the amended claims are not anticipated by Woodson, and request that this rejection be withdrawn.

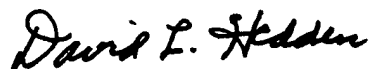
Comments related to 35 USC § 103 (a)

Claims 7, which was limited to a foundry binder system wherein the fatty acid ester was butyl tallate, was not rejected under 35 USC § 103 (a). Since claim 1 has been amended to incorporate this limitation, Applicants assume that amended claim 1 and the remaining claims dependent upon claim 1, are patentable if amended claim 1 is not anticipated by Woodson.

Conclusion

Applicants submit that the application is now in condition for allowance and respectfully request a notice to this effect. If the Examiner believes further explanation of Applicants' position is needed, Applicants' attorney will discuss this matter over the telephone or visit the Examiner personally if this may be useful.

Respectfully submitted,



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